Course: PHYS/ELEC 564
Term: Spring 2020
Room: BRK 103
Class: TTH 2:30-3:45PM

Instructor Contact Information

Instructor: Peter Nordlander
Office: BH 308
Email: nordland@rice.edu
Office Hours: After consultation

Grader: Zhiyuan Liu, zyliu@rice.edu

Course Objectives and Learning Outcomes

The semi-classical theory of conduction in metals, Beyond the relaxation-time approximation, Beyond the independent electron approximation, Surface effects, Anharmonic effects in crystals, Phonons in metals, Dielectric properties of insulators, Plasmonics, Photonics, Diamagnetism and paramagnetism, Electron interactions and magnetic structure, Magnetic ordering, . . .

Required Texts and Materials

Solid State Physics, N.W. Ashcroft and N.D. Mermin

Exams and Papers

Project: Each student should present a topic in 20 min presentation.
Exam: A self-scheduled final oral exam

Grade Policies

The grade is determined from: HW (50%); student project presentation (25%); and a final exam (25%).

Absence Policies

The students should try to attend class since the lectures include material beyond the book

Rice Honor Code

In this course, all students will be held to the standards of the Rice Honor Code, a code that you pledged to honor when you matriculated at this institution. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-system-handbook/. This handbook outlines the University's expectations for the integrity of your academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process.

Disability Support Services

If you have a documented disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Disability Support Services (Allen Center, Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

Syllabus Change Policy

This syllabus is only a guide for the course and is subject to change with advanced notice.